

AMENDMENT TO THE SPECIFICATION

Please replace the Abstract with the enclosed, amended Abstract.

Please replace the paragraph appearing on page 1, line 17 to page 2, line 2 with the following amended paragraph:

Importing data from electronic images, such as scanned documents is a laborious task. Often one requires not nearly an electronic copy, such as a scan, of the image, but also the data or other textual information in a form that can be used. Most prior art systems for assisting the completion of computer-generated forms use optical character recognition, natural language processing and other artificial intelligence techniques ~~for~~ to identify specific types of information elements within scanned documents. Once the information elements are identified, they are placed in the appropriate fields or locations on a selected form. However, these methods are widely known as being very unreliable.

Please replace the paragraph appearing on page 22, lines 21-28 with the following amended paragraph:

Object detection and extraction system 202 includes a number of program modules, shown in FIG. 3, that allow the system to automatically distinguish between one or more objects in digital image data 210. Object detection and extraction system 202 includes an ~~data~~ object pixel detection module 300, a segmentation module 310, and a single object extraction module 320.

Please replace the paragraph appearing on page 25, line 15 to page 26, line 12 with the following amended paragraph:

The single object extraction module 320 includes a pixel analysis module 400, a

verification module 410 and an object location output module 420. A sub-image 430 that possibly contains a single object is received by the pixel analysis module 400 and pixel data is generated. Based on the pixel data, estimated coordinates of the location of an object within the sub-image 430 ~~is are~~ calculated. The estimated coordinates are sent to the verification module 410. The verification module 410 compares each of the estimated coordinates with the main image 330 of which the sub-image 430 is a part. Note that it is possible that the image 330 can be the same as the sub-image 430. The comparison is used to determine whether any of the estimated coordinates are a plausible fit with the image 330 and verify the existence of an object in the sub-image 430. If a plausible fit is found, ~~the~~ then the correct coordinates are sent to the object location output module 420 and then sent as output (box 440). From the coordinates, the object can be segregated and extracted from the sub-image 430. If a plausible fit is not found, then the object location output module 420 is informed of this by the verification module 410. In this case, the object location output module 420 does not output the coordinates of the single object but instead outputs a message stating that an object could not be found in the sub-image 430.

Please replace the paragraph appearing on page 27, lines 21-28 with the following amended paragraph:

If ~~one of the sub-images~~ the sub-image being processed has no disparities present, at step 504, then the sub-image is processed again, individually. This involves calculating the number of data pixels within the sub-image in the first direction to generate a third data set, at step 508 and the number of data pixels in the second direction to generate a fourth data set, at step 509.

Please replace the paragraph appearing on page 31, lines 5-19 with the following amended paragraph:

It should be noted that there is another situation in which an object in the scanned image 810 602 would yield the same graph of $P(j)$ (the first trapezoidal shape 620) and the same graph of $Q(i)$ (second trapezoidal shape 630). This possibility is shown in FIG. 7. In this situation, a second object 700 is located within a second scanned image 702. The second object 700 has the same size of the first object 600 shown in FIG. 6, but has an inverse orientation (i.e., the second object 700 is oriented at angle $(-\theta)$ instead of angle (θ)). The second object 700 has coordinates (h,b), (g,d), (e,c) and (f,a) and is the only other possible object that would generate the identical trapezoidal shapes 620 720 and 630 730.

Please replace the paragraph appearing on page 37, lines 15-19 with the following amended paragraph:

In one embodiment the object detection and extraction process is applied to a sub-sampled version of the image. The advantage of using a sub-sampled version of the image is that this avoids dealing with high resolution image data.